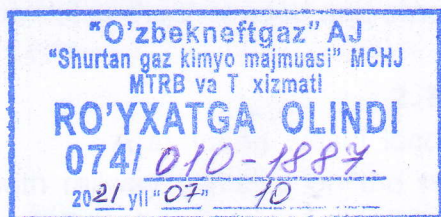


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## REQUIREMENTS SPECIFICATIONS

for purchasing a shunting diesel locomotive for the movement of rail vehicles on the tracks of the plant "Uzbekistan GTL" LLC

Shurtan GCC – 2021



## 1. DESCRIPTION OF GOODS

The shunting diesel locomotive will be designed for the production of shunting operations with loaded and empty rail vehicles on the tracks of the plant "Uzbekistan GTL" LLC.

## 2. PURPOSE OF PROCUREMENT

A shunting diesel locomotive is used to perform all types of shunting operations with railway vehicles on the territory of the plant "Uzbekistan GTL" railway system. The shunting diesel locomotive will perform all shunting operations on the tracks and loading racks within 24 hours.

A shunting diesel locomotive must comply with the climatic version U1 as per GOST 15150-90, GOST 22339-88 Shunters and industrial diesel locomotives. Types and main parameters, GOST 11018-2011 Traction railway stock wheelsets of 1520 mm gauge railways. General specifications.

## 3. BASIS OF PROCUREMENT

In execution of the decree No.PP-2706 of the president of the Republic of Uzbekistan dated December 29, 2016 "Additional measures for the implementation of the investment project "Production of synthetic liquid fuel based on treated methane of Shurtan gas chemical complex" and based on minutes of the chairman of the board of Uzbekneftegaz JSC M.R. Abdullaev dated 08.13.2021 to provide railway services as per the outsourcing of the railway system contract of Uzbekistan GTL LLC.

The financing will be at Shurtan GCC LLC's own cost and expense.

## 4. TECHNICAL REQUIREMENTS

### Basic technical specifications of the shunting diesel locomotive

Table No.1

| No. | Name of parameter, unit          | Value  |
|-----|----------------------------------|--|
| 1   | Diesel locomotive power, kW (hp) | Not less than 882 (1200)   |
| 2   | Transmission type                | The shunting diesel locomotive shall be a single-section locomotive with electric DC.  |
| 3   | Axle formula                     | 3o – 3o<br>To increase the axle load, the design of the locomotive should provide for the possibility of installing removable ballast up to 10% of the total weight. |
| 4   | Load per wheelset on rails, kN   | No more than 206   |
|     |                                  | No more than 319<br>Power traction and transportation of a shunting diesel locomotive  |







|    |  |                          |
|----|--|--------------------------|
| 25 | Pneumatic brake system                                   | brake valve No395, No254 |
| 26 | Electric dynamic brake                                   | +                        |
| 27 | Self-locking system at uncoupling sections               | +                        |
| 28 | Equipment for uncoupling the wagon from the driver's cab | +                        |
| 29 | Continuous diesel self-cleaning air filter               | +                        |
| 30 | Extinguisher on diesel discharge                         | +                        |
| 31 | Silencer at diesel air inlet                             | +                        |
| 32 | Lubrication system                                       | +                        |
| 33 | Refrigerator   | +                        |
| 34 | Air conditioner  | +                        |
| 35 | Cab heater   | +                        |
| 36 | Resistor test  | +                        |
| 37 | Install alkaline accumulator                             | +                        |

Note: "+" indicates availability of the listed systems on the diesel locomotive

## 5. REQUIREMENTS TO THE SHUNTING DIESEL LOCOMOTIVE

5.1.1 Diesel engine should be of type 4-stroke diesel with installed on it water-oil heat exchanger and water circulation pump of cooling circuit;

5.1.2 Microprocessor control and diagnostic system should be installed;

5.1.3 The brake should be pneumatic and not blowing grid resistor.

5.1.4 Integrated locomotive protection system automatic cab signaling should be equipped;

5.1.5 Automatic braking system should be equipped in case of diesel locomotive self-uncoupling;

5.1.6 The propulsion system should be equipped at insufficient air pressure in the brake pipe;

5.1.7 Automatic fire alarm system should be equipped in case of diesel locomotive fire;

5.1.8 Brake pipe uncoupling signaling sensor should be equipped;

5.1.9 The driver's cab should be of larger dimensions, equipped with two driver's consoles with electronic controller with display panel; with flooring made of hard-fuel plywood and linoleum; with installation of microclimate system including heating, ventilation and air conditioning;

5.1.10 Crest lubrication systems should be installed one per bogie;

5.1.11 A fully in-line fine oil filter should be installed;

5.1.12 An expansion tank with a water level sensor should be installed;

5.2 The Manufacturer should agree on the detailed drawings with the Customer and operating organization (Shurtan GCC LLC) before manufacturing the shunting diesel locomotive.

5.3 The Manufacturer is also responsible for compliance with technical parameters of the shunting diesel locomotive.





5.4 Before delivery of the equipment, the Manufacturer of the shunting diesel locomotive should agree on the list of equipment with the Customer and operating organization (Shurtan GCC LLC)

5.5 A Shunting diesel locomotive should be new, not previously used, not restored after heavy overhaul and overhaul, reconditioned after a failure or short-term operation. Delivery of a diesel locomotive with restored parts, components, and units is forbidden.

5.6 The shunting diesel locomotive should be manufactured no earlier than 2021.

5.7 A diesel-shunting locomotive must comply with the climatic version U1 as per GOST 15150-90, GOST 22339-88 Shunters, and industrial diesel locomotives. Types and main parameters, GOST 11018-2011 Traction railway stock wheelsets of 1520 mm gauge railways. General specifications GOST 12.2.020-76 Occupational safety standards system, as well as environmental and sanitary standards.

5.8 The shunting diesel locomotive should comply with requirements of safety and fire safety regulations. During operation should not spark and other sources of fire.

5.9 Marking should meet the Manufacturer's requirements for making, taking into account regulatory and technical documents.

5.10 The shunting diesel locomotive should be insured.

5.11 The Manufacturer is responsible for the manufacturing, supply, installation, and start-up of the shunting diesel locomotive.

5.12 The Supplier will carry out commissioning and training of the operating organization's personnel.

## **6. PACKAGE OF THE TECHNICAL DOCUMENTATION**

To ensure continuous and stable operation of the shunting diesel locomotive, the Supplier should provide a package of engineering and process control documentation, including, but not limited to:

- ❖ Diesel locomotive datasheet
- ❖ DGU data sheet (diesel generator unit)
- ❖ Certificates for main components and devices
- ❖ Operating manual
- ❖ Wiring diagram of the locomotive
- ❖ Spare parts for two years



## **7. SCOPE OF DELIVERY**

Shunting diesel locomotive for handling loaded and empty railway vehicles on tracks and loading racks in the quantity of two pieces

The complete set and marking should meet the requirements to ensure the safety and security of the shunting diesel locomotive at transportation, loading, and unloading operations and reliable delivery of goods to the destination point - 732602 Kengsoy station, Uzbekistan railways JSC, consignee – Shurtan GCC LLC, freight code - 4198.



**Terms of Delivery:**

|                                |  |
|--------------------------------|--|
| <b>Railway wagon shipping:</b> | DAP - Kengsoy railway station (station code 732602, "Uzbekistan Railways" JSC                    |
| <b>Transport delivery:</b>     | DAP – 180300, Shurtan settlement, Guzar District, Kashkadarya Region, the Republic of Uzbekistan |

**8. EXPERIMENTAL INDUSTRIAL TEST**

8.1. The bench test (Factory acceptance test- FAT) of equipment in the presence of the Customer's representatives (operating organization - Shurtan GCC LLC) and all transportation costs should be paid by the Equipment Supplier.

8.2. In-situ test (Site acceptance test - SAT) of the shunting diesel locomotive on railway track will be carried out at a maximum thrust after commissioning (the Uzbekistan GTL LLC).

**9. REQUIREMENTS TO SERVICE AND OPERATING LIFE OF EQUIPMENT**

Requirements to the guaranteed service life are as follows:

9.1. Guaranteed lifetime after commissioning is 12 months.

9.2. The service life of the shunting diesel locomotive is determined by a manufacturer or manufacturing plant, taking into account energy consumption and operating costs as per regulatory and technical documents but should not be less than 35 years.

**10. TIME OF DELIVERY**

The Supplier should manufacture and deliver the goods within 92 (ninety-two) calendar days from the date of the notification of equipment manufacturing is received.

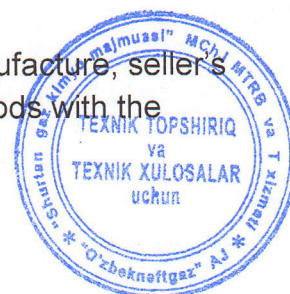
**11. REQUIREMENTS TO THE RULES OF ACCEPTANCE OF THE GOODS**

At the arrival of the freight (the shunting diesel locomotive), the acceptance certificate should be issued, acceptance conditions should meet under the contract concluded with the Supplier, including:

- Visual inspection of the shunting diesel locomotive;
- Complete set of the equipment should be accepted according to technical specifications table No1, items 5, 6 and 7;
- The report will be issued in two copies;
- Each copy should be certified with original signatures;
- in case of a loss or damage to the complete set of the equipment, the Supplier should eliminate it within ten calendar days from the date of demand by the Customer or operating organization (the Shurtan GCC LLC).

**12. ADDITIONAL REQUIREMENT**

Certificate of conformity of the goods, certificate of materials for manufacture, seller's invoice with description of goods, certificate of the country of origin of goods with the





indication of the invoice number and date, quantity, unit price and total amount, certificate of quality of the goods issued by the manufacturer, list of references.

- The participant in the procurement procedure must have the necessary certificates for the goods that are the subject of the contract. Should not be an organization whose property is seized by a court, administrative body and-or activity is stopped. Availability of own manufacturing capabilities (or availability of an official document on according to law agency from the manufacturer's plant), experience in the market for the supply of equipment of given types for at least 2 (two) years (according to a reference of concluded and executed contracts of an associated character).
- the submitted technical proposal must have a copy in electronic media (CD/DVDs or USB data carrier);
- Certificates should be provided (international certificates ISO - 9001, 14001, 45001, 50001, manufacturer's quality certificate and-or other certificates of international, recognized laboratories and test centers).

**Chief mechanic of SGCC:**

**Kh. Allayorov**

**Chief power engineer of SGCC:**

**A. Beknazarov**

**Head of the railway transportation service of SGCC:**

**E. Jovliyev**

**Deputy Head of the railway transportation service of SGCC:**

**J. Yarashev**

**Agreed with (representative of «Uzbekistan GTL» LLC):**

**Leading railway specialist of GTL plant:**

**A. Nevarayev**

